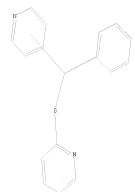
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During November, try the new LSUS format of legal status information in the CA/CAplus family databases for free! Complete details on the number of free displays and other databases participating in this offer appear in NEWS 10.

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- L1 STRUCTURE UPLOADED
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- L1 STR



Structure attributes must be viewed using STN Express query preparation.

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Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 15:29:22 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 309 TO ITERATE

100.0% PROCESSED 309 ITERATIONS

SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\* BATCH \*\*COMPLETE\*\*

5126 TO 7234 PROJECTED ITERATIONS: PROJECTED ANSWERS: 0 TO

1.2 0 SEA SSS SAM L1

L3 0 L2

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Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 185.40 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y) /N or END:v FULL SEARCH INITIATED 15:29:35 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED -5936 TO ITERATE

100.0% PROCESSED 5936 ITERATIONS SEARCH TIME: 00.00.01

8 ANSWERS

8 SEA SSS FUL L1 T. 4

4 T.4 1.5

=> d 1-4 ibib abs hitstr THE ESTIMATED COST FOR THIS REQUEST IS 22.56 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y) /N:y

L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2008:608265 CAPLUS

DOCUMENT NUMBER: 148:585731

TITLE: Preparation of phenylsulfonylmethylpyridine and

phenylsulfinylmethylpyridine derivatives as inhibitors

of B amyloid protein production

INVENTOR(S): Mivauchi, Satoru; Kubota, Hideki; Motoki, Kavoko; Ito,

Masavuki

PATENT ASSIGNEE(S): Daiichi Sankyo Co., Ltd., Japan SOURCE: Jpn. Kokai Tokkyo Koho, 149pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE:

GI

Japanese FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE JP 2008115166 JP 2007-262868 20071009 20080522 JP 2006-276719 PRIORITY APPLN. INFO.: A 20061010 OTHER SOURCE(S): MARPAT 148:585731

R3 Ar1 Х Ar2

AB The title compds. I [Arl = Ph having substituent; Ar2 = (un)substituted Ph , (un)substituted heterocyclic group; X = S, SO, SO2; Y = H, NR1R2, OR1'; R1 = H, alkyl, OH; R2 = H, (un)substituted alkyl, (un)substituted alkoxy, etc.; R1 = H, (un)substituted alkyl; Z = O, S; R3 = H, alkyl, halo] are prepared Thus, 5-[[(4-chlorophenyl)sulfonyl](2,5-difluorophenyl)methyl]-N,4dimethylpyridine-2-carboxamide was prepared in a multistep process starting from 2,5-dibromo-4-methylpyridine and 2,5-difluorobenzaldehyde. The β amyloid protein production inhibiting activity of compds. of this invention was demonstrated.

913090-90-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation of phenylsulfonylmethylpyridine and phenylsulfinylmethylpyridine derivs. as inhibitors of  $\beta$  amyloid protein production)

913090-90-1 CAPLUS RN

2-Pvridinecarboxamide, 5-[(2,5-difluorophenvl)][5-(trifluoromethvl)-2-CN pvridinvl|sulfonvl|methvl|-N-(2-hvdroxvethvl)-4-methvl- (CA INDEX NAME)

- IT 913090-88-7P 913090-89-8P 913091-80-2P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of phenylsulfonylmethylpyridine and phenylsulfinylmethylpyridine derivs. as inhibitors of  $\beta$  amyloid protein production)
- RN 913090-88-7 CAPLUS
- CN 2-Pyridinecarboxaldehyde, 5-[(2,5-difluorophenyl)][[5-(trifluoromethyl)-2-pyridinyl]thio]methyl]-4-methyl- (CA INDEX NAME)

- RN 913090-89-8 CAPLUS
- CN 2-Pyridinecarboxylic acid, 5-[(2,5-difluorophenyl)[[5-(trifluoromethyl)-2-pyridinyl]sulfonyl]methyl]-4-methyl- (CA INDEX NAME)

913091-80-2 CAPLUS RN

Pyridine, 2-bromo-5-[(2,5-difluorophenyl)[[5-(trifluoromethyl)-2-CN pyridinyl]thio]methyl]-4-methyl- (CA INDEX NAME)

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:1093716 CAPLUS

DOCUMENT NUMBER: 145:438535

TITLE: Preparation of pyridylmethylsulfone derivatives as

inhibitors of production/secretion of β-amyloid protein

INVENTOR(S): Miyauchi, Satoru; Kubota, Hideki; Motoki, Kayoko; Ito,

Masayuki Daiichi Pharmaceutical Co., Ltd., Japan PATENT ASSIGNEE(S):

PCT Int. Appl., 191pp. CODEN: PIXXD2 SOURCE:

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

07/11/2009 TOh

						DATE APPLICATION						NO. DA						
	WO 2006109729						A1 20061019							20060407				
	W:	ΑE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BE	, BG,	BR,	BW,	BY,	BZ,	CA,	CH,	
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	D2	, EC,	EE,	EG,	ES,	FI,	GB,	GD,	
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		KZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	L	, MA,	MD,	MG,	MK,	MN,	MW,	MX,	
		MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PF	, PL,	PT,	RO,	RU,	SC,	SD,	SE,	
		SG,	SK,	SL,	SM,	SY,	TJ,	TM,	TN,	TF	, TT,	TZ,	UA,	UG,	US,	UZ,	VC,	
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		CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	MI	, MR,	NE,	SN,	TD,	TG,	BW,	GH,	
		GM,	KE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ	, TZ,	UG,	ZM,	ZW,	AM,	ΑZ,	BY,	
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MX	2007	0124	90		A 20071109				MX 2007-12490									
KR	2007	1168	65		A 20071211			1211		KR 2007-722896					20071008			
	CN 101163678								CN 2006-80011439									
	NO 2007005080					A 20071105				NO 2007-5080 JP 2005-112802					20071009			
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OTHER S						MARPAT 145:43853												

AB The title compds. I [Arl = Ph having substituents; Ar2 = (un)substituted Ph. (un)substituted heterocycly!; Y = H, NR1R2, etc.; R1 = H, alkyl, OH; R2 = H, (un)substituted alkyl, (un)substituted alkoxycarbonyl, etc.; R3 = H, alkyl, halo; X = S, SO, SO2; Z = O, S] are prepared Thus,  $5 \cdot [(4-\text{chlorophenyl})\text{sulfonyl}](2,5-\text{difluorophenyl})\text{methyl}]-N,4-dimethylpyridine-2-carboxamide was prepared in a multistep process from 2,5-diforomo-4-methylpyridine and 2,5-difluorobenzaldehyde. In an assay for the inhibiting activity against the production of <math display="inline">\beta$ -amyloid protein, many compds. of this invention showed ECSO values  $\leq 5$  nM.

TOh 07/11/2009

Ι

IT 913090-88-7P 913090-89-8P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of pyridylmethylsulfone derivs. as inhibitors of production/secretion of  $\beta$ -amyloid protein)

RN 913090-88-7 CAPLUS

CN 2-Pyridinecarboxaldehyde, 5-[(2,5-difluorophenyl)][[5-(trifluoromethyl)-2-pyridinyl]thio]methyl]-4-methyl- (CA INDEX NAME)

RN 913090-89-8 CAPLUS

CN 2-Pyridinecarboxylic acid, 5-[(2,5-difluorophenyl)[[5-(trifluoromethyl)-2-pyridinyl]sulfonyl]methyl]-4-methyl- (CA INDEX NAME)

IT 913090-90-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pyridylmethylsulfone derivs. as inhibitors of production/secretion of  $\beta\text{-amyloid}$  protein)

RN 913090-90-1 CAPLUS

2-Pyridinecarboxamide, 5-[(2,5-difluorophenyl)[[5-(trifluoromethyl)-2pyridinyl]sulfonyl]methyl]-N-(2-hydroxyethyl)-4-methyl- (CA INDEX NAME)

IT 913091-80-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyridylmethylsulfone derivs, as inhibitors of production/secretion of B-amyloid protein)

RN 913091-80-2 CAPLUS

CN Pyridine, 2-bromo-5-[(2,5-difluorophenyl)[[5-(trifluoromethyl)-2pyridinyl]thio]methyl]-4-methyl- (CA INDEX NAME)

OS.CITING REF COUNT:

THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD

(3 CITINGS)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

1

ACCESSION NUMBER: 2005:14361 CAPLUS

DOCUMENT NUMBER: 142:113905

TITLE: Preparation of heterocyclic methyl sulfone derivatives

as B-amyloid protein secretion and production

inhibitors INVENTOR(S):

Kubota, Hideki; Yasukouchi, Takanori; Miyauchi, Satoru; Motoki, Kayoko; Saito, Masanori; Iimori,

Hitoshi

PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 345 pp.

CODEN: PIXXD2 DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

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R	ZA 2005009613 RU 2336270 NO 2005005921					C2 20081020					2005-	1415	20040629					
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## OTHER SOURCE(S): MARPAT 142:113905

The title compds, R1R2R4CXR3 (R1 represents an optionally substituted heterocyclic group; R2 represents an optionally substituted cyclic hydrocarbon group or optionally substituted heterocyclic group; R3 represents an optionally substituted cyclic hydrocarbon group or optionally substituted heterocyclic group; R4 represents hydrogen or C1-6 alkyl; and X represents S, SO, or SO2), N-oxides thereof, S-oxides thereof, salts thereof, or solvates thereof are prepared 2-[[(4-Chlorophenyl)sulfonyl](cyclohexyl)methyl]-1,4-difluorobenzene was prepared in several steps from 2,5-difluorobenzyl alc. and 4-chlorobenzenethiol. In an in vitro assay for  $\beta$ -amyloid protein production inhibiting activity, compds. of this invention showed IC50 values of ≤ 5 nM to 500 nM.

820223-95-8P 820223-96-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heterocyclic Me sulfone derivs. as β-amyloid protein secretion and production inhibitors)

820223-95-8 CAPLUS RN

CN 2-Pyridinamine, 5-chloro-4-[[(5-chloro-2-pyridiny1)sulfony1](2,5difluorophenyl)methyl]- (CA INDEX NAME)

820223-96-9 CAPLUS RN

CN Methanesulfonamide, N-[5-chloro-4-[[(5-chloro-2-pvridinvl)sulfonvl](2,5difluorophenyl)methyl1-2-pyridinyl1- (CA INDEX NAME)

OS.CITING REF COUNT: THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD

(2 CITINGS)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD, ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:532638 CAPLUS

DOCUMENT NUMBER: 139:101146

TITLE: Preparation of benzyl or heterocyclylmethyl phenyl or

heterocyclyl sulfones as β-amyloid protein

production/secretion inhibitors

INVENTOR(S): Yasukochi, Takanori; Ito, Masayuki; Kubota, Hideki; Miyauchi, Satoshi; Saito, Masaki

PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 540 pp. CODEN: PIXXD2

DOCUMENT TYPE: Pat.ent. LANGUAGE:

Japanese FAMILY ACC. NUM. COUNT:

## PATENT INFORMATION:

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		7399																		
		2007									US 2	2007-	8295	33		2	0070	727		
PRIOR	IT	Y APP	LN.	INFO	. :						JP 2	2001-	3957	01		A 2	0011	227		
											WO 2	2002-	JP13	792	1	vi 2	0021	227		
												2004-								
OTHER	SC	DURCE	(S):			MARI	TAS	139.	1011	46										

OTHER SOURCE(S): MARPAT 139:101146

AB Novel compds. having various substituents as represented by the following general formula R1(R2)(R3)C-X-R4, salts thereof, and solvates of the same Wherein X = S, SO, SO2; R1 = CR5R6R7, NR8R9, X1R10, X2R11; wherein R5, R6, R7 = halo, cyano, NO2, -Q51-Q52-Q53-Q54; Q51, Q53 = single bond, CO, S(0), SO2, COCO, COC(S), C(S)C(S); Q52 = single bond, O, ON(A51), ON(COA51), N(A51), N(COA51), N(CO2A51), N[CON(A51)(A52)], N(OA51), N(NA51A52), N(A51)N(A52), N(COA51)N(A52), N(A51)-O, N(COA51)-O, S, N:N, C(A51):N, C(A51):N-O, C(A51):N-N(A52), N:C(A51), O-N:C(A51), N(A51)-N:C(A52), C(:NA51)-N(A52); O54 = A53, OA53, N(A53)(A54), SA53, NA54-OA53, NA55-N(A53)(A54), O-N(A53)(A54); wherein A51, A52, A53 = H, (un) substituted hydrocarbyl or heterocyclyl; R2, R3, R4, R8, R9, R10, R11 = -Q51-Q52-Q53-Q54 defined in R5-R7; X1 = 0, S; X2 = S0, S02; or R1 and R2 or R3 and R4 are combined together to form (un)substituted cyclohydrocarbyl or heterocyclyl] are prepared These compds. have an effect of inhibiting the production/secretion of a β-amyloid protein and are useful for the prevention or treatment of diseases caused by unusual production/secretion of β-amyloid, in particular Alzheimer's disease or Down's syndrome. Thus, a solution of 100 mg 2,5-dichloro-4-[(4-chlorophenylthio)-(2,5-difluorophenyl)methyl]pyridine (preparation given) and 200 µL morpholine in 1.0 mL 1,4-dioxane was stirred at 100° for 2 days to give 4-[5-chloro-4-[(4-chlorophenylthio)-(2,5difluorophenyl)methyl]pyridin-2-yl]morpholine which (90 mg) was dissolved in 12 mL MeOH, treated with 60 mg ammonium molybdate tetrahydrate [(NH4)6Mo7024.4H20] and 6 mL 30% H202, and stirred for 8 h to give 83% 4-[5-chloro-4-[(4-chlorophenylsulfonyl)-(2,5-difluorophenyl)methyl]pyridin-2-yl]morpholine (I). I in vitro glioma cell (H4 cell) expressing human

 $\beta\text{-amyloid}$  protein precursor protein gene (APP751 gene) with EC50 of  ${\leq}50~\text{nM}.$ 

558463-33-5P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of benzyl or heterocyclylmethyl Ph or heterocyclyl sulfones as \[ \beta = \text{ample ample to the production secretion inhibitors for treatment or } \]

preparation of Alzheimer's disease or Down's syndrome)

RN 558463-33-5 CAPLUS

CN Pyridine, 5-chloro-2-[[(2,5-difluorophenyl)-4-pyridinylmethyl]thio]- (CA INDEX NAME)

IT 558463-34-6P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of benzyl or heterocyclylmethyl Ph or heterocyclyl sulfones as  $\beta$ -amyloid protein production/secretion inhibitors for treatment or preparation of Alzheimer's disease or Down's syndrome)

RN 558463-34-6 CAPLUS

OS.CITING REF COUNT:

- THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
- 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TOh 07/11/2009

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